

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An object entity stored in a computer-readable storage medium for use with a user interface system for a process plant, wherein the object entity represents a process plant element of the process plant, the object entity comprising:

a first portion defining graphics for a depiction of a the process plant element ~~of the process plant~~ via the user interface;

a second portion identifying a data source for data indicative of on-line operation of the process plant element ~~to be displayed via the depiction~~, wherein data indicative of the online operation of the process plant element is retrieved from the data source when the graphics for the depiction of the process plant element are rendered for display via the user interface so that the depiction of the process plant element is ~~displayed via the user interface in a manner indicative of the~~ rendered dynamically based on the data indicative of the on-line operation of the process plant element; and

~~a third portion defining a method to be implemented to simulate on line operation of the process plant element; and~~

wherein the first portion is set forth in a declarative format.

2. (Original) The object entity of claim 1, wherein the first portion defines an instance of a shape object utilized in rendering the depiction.

3. (Original) The object entity of claim 1, wherein the first portion defines an instance of a composite shape object utilized in rendering the depiction.

4. (Original) The object entity of claim 1, wherein the declarative format is in accordance with an extensible markup language.

5. (Original) The object entity of claim 1, wherein the declarative format comprises a vector graphics format for script defining the graphics.

6. (Original) The object entity of claim 1, wherein the first portion further defines a data conversion parameter to specify a graphical depiction of the data indicative of on-line operation of the process plant element.

7. (Canceled)

8. (Previously Presented) The object entity of claim 1, wherein the third portion is set forth in the declarative format.

9. (Original) The object entity of claim 1, wherein the second portion is set forth in the declarative format.

10. (Original) The object entity of claim 1, wherein the graphics include animated elements having animation indicative of the on-line operation of the process plant element.

11. (Currently Amended) A user interface system for a process plant, comprising:
a computer processor;

a computer-readable storage medium having instructions stored thereon which, when executed by the computer processor provide:

a graphic display editor to configure a process graphic display having a graphic display element representative of a process plant element of the process plant, wherein configuration information for the process graphic display generated by the graphic display editor is stored in the computer-readable medium in accordance with a declarative language;

a conversion engine for generating commands in accordance with a further declarative language based on graphics related information of the configuration information and for generating a data source reference file from the configuration information for the process graphic display that identifies a data source for data to be displayed in connection with the

graphic display element, and generating commands specifying a data conversion routine for the graphic display element for converting data values from the data source to graphically and dynamically display the data from the data source in association with the display of the graphic display element to dynamically render a depiction of the process plant element based on the data values; and

a graphics rendering engine to generate a the depiction of the process graphic display during runtime based on commands derived from the configuration information.

12. (Original) The user interface system of claim 11, wherein the declarative language defines an extensible format for expressing the configuration information.

13. (Original) The user interface system of claim 11, wherein the configuration information is stored in accordance with an object model framework based on the declarative language.

14. (Original) The user interface system of claim 13, wherein the object model framework defines primitive shape objects made available by the graphic display editor to configure the process graphic display to include an additional graphic display element constructed from the primitive shape objects.

15. (Original) The user interface system of claim 13, wherein the object model framework defines a composite object made available by the graphic display editor to configure the process graphic display to include an additional graphic display element constructed from the composite object.

16. (Original) The user interface system of claim 13, wherein the graphic display editor comprises graphical editing tools to create the composite object from previously constructed process model objects stored in the computer-readable medium.

17. (Original) The user interface system of claim 16, wherein the graphical editing tools are defined via the object model framework.

18. (Original) The user interface system of claim 11, wherein the declarative language is an extensible markup language.

19. (Original) The user interface system of claim 11, wherein the declarative language defines an XML-based format for describing the configuration information.

20. (Canceled)

21. (Previously Presented) The user interface system of claim 11, wherein the further declarative language sets forth the graphics-related language in accordance with a vector graphics format.

22. (Canceled)

23. (Canceled)

24. (Currently Amended) A method of configuring a user interface system for a process plant, comprising:

using an object defining a composite graphical element to create a plurality of instances thereof in respective process graphic displays to be depicted via the user interface, wherein the composite graphical element is composed of vector graphic entities;

storing data in a computer-readable medium of the user interface system defining the plurality of instances of the composite graphical element;

modifying the object defining the composite graphical element;
propagating the modification to each of the plurality of instances of the composite graphical element; and
automatically updating each of the plurality of instances of the composite graphical element to reflect the modification.

25. (Original) The method of claim 24, wherein the object comprises a definition set forth in an XML-based graphics language.

26. (Currently Amended) An object entity stored in a computer-readable storage medium for use with a user interface system for a process plant, wherein the object entity represents a process plant element of the process plant, the object entity comprising:

a graphics portion defining graphics for a depiction of ~~a~~ the process plant element ~~of the process plant~~ via the user interface;

a parameters portion identifying configurable aspects of the graphics; and,

a navigation portion identifying data sources for content to be displayed in connection with the graphics, wherein data indicative of the online operation of the process plant element is retrieved from the data sources when the graphics for the depiction of the process plant element are rendered for display via the user interface so that the depiction of the process plant element is rendered dynamically based on the data indicative of the on-line operation of the process plant element; ~~and~~

~~a simulation portion defining a method to be implemented to simulate the on-line operation of the process element;~~

wherein the graphics portion, the parameters portion, and the navigation portion, ~~and the simulation portion~~ are stored in the computer-readable medium discretely.

27. (Currently Amended) The object entity of claim 26, wherein the computer-readable medium comprises a plurality of memory storage devices, such that the graphics

portion, the parameters portion, and the navigation portion, ~~and the simulation portion~~ are not stored on a single memory storage device.

28. (Original) The object entity of claim 26, wherein the graphics portion comprises a description in an XML-based graphics language.

29. (New) The object entity of claim 1, further comprising a third portion defining a method to be implemented to simulate the on-line operation of the process plant element.